

# Monthly Operating Report

**DECEMBER 2023**



**Rockland, MA WWTP**





January 13, 2024

Mr. Chuck Heshion

Rockland Sewer Commission Chairman

587 Rear Summer Street

Rockland, MA 02370

RE: Rockland Wastewater Facility

Monthly Report—December 2023

Dear Mr. Heshion,

I have enclosed December's 2023 Monthly Operating Report (MOR) for the Veolia Operations and Maintenance contract.

Please contact me if you should you have any questions regarding this report.

Sincerely,

Rick Kotouch

Veolia Project Manager

CC:

Daniel Duross

Sherry Vallie

# DECEMBER 2023 MONTHLY OPERATING REPORT

## 1. SUMMARY:

The facility will be reporting **0** exceedance for the month of November 2023

- 1) There was **0** lost time / first aid injuries throughout the month.
- 2) The facility treated a total of **86,494,000** million gallons. The average daily flow was **2.790** MGD
- 3) The total rainfall for this reporting period was **6.57"**
- 4) I&I Work is ongoing
- 5) **179** work orders were closed in December, with **11** as corrective maintenance work order and **7** were emergency call outs
- 6) Massachusetts general wastewater permit began April 1st.

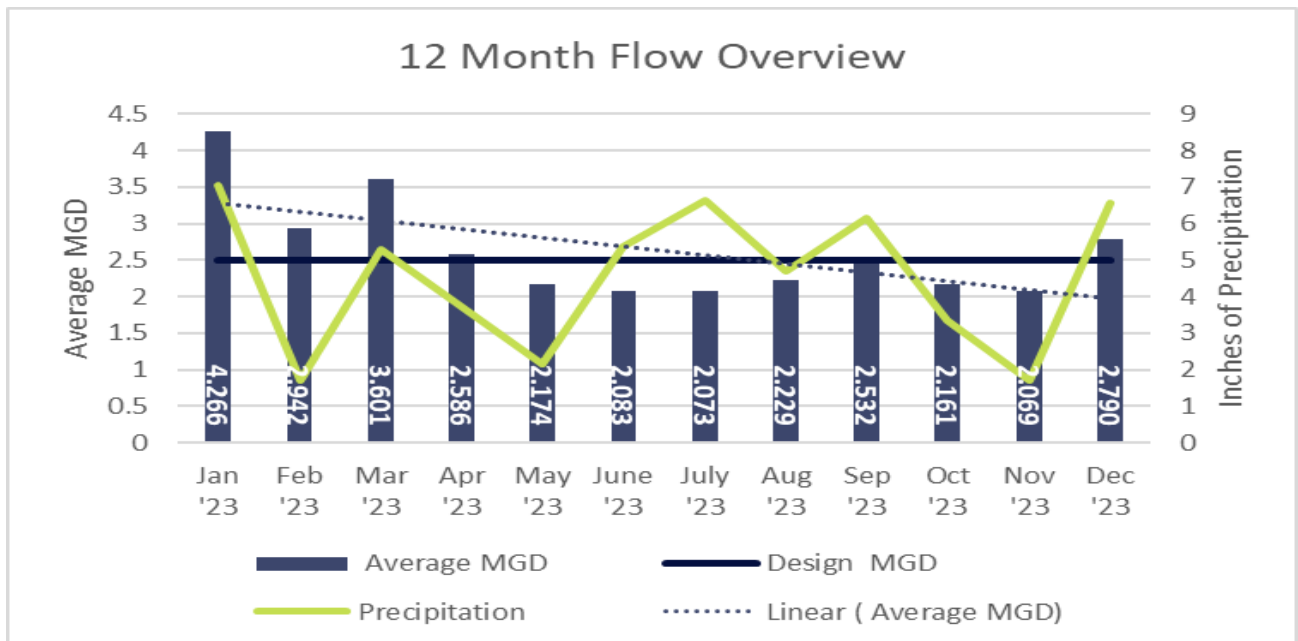
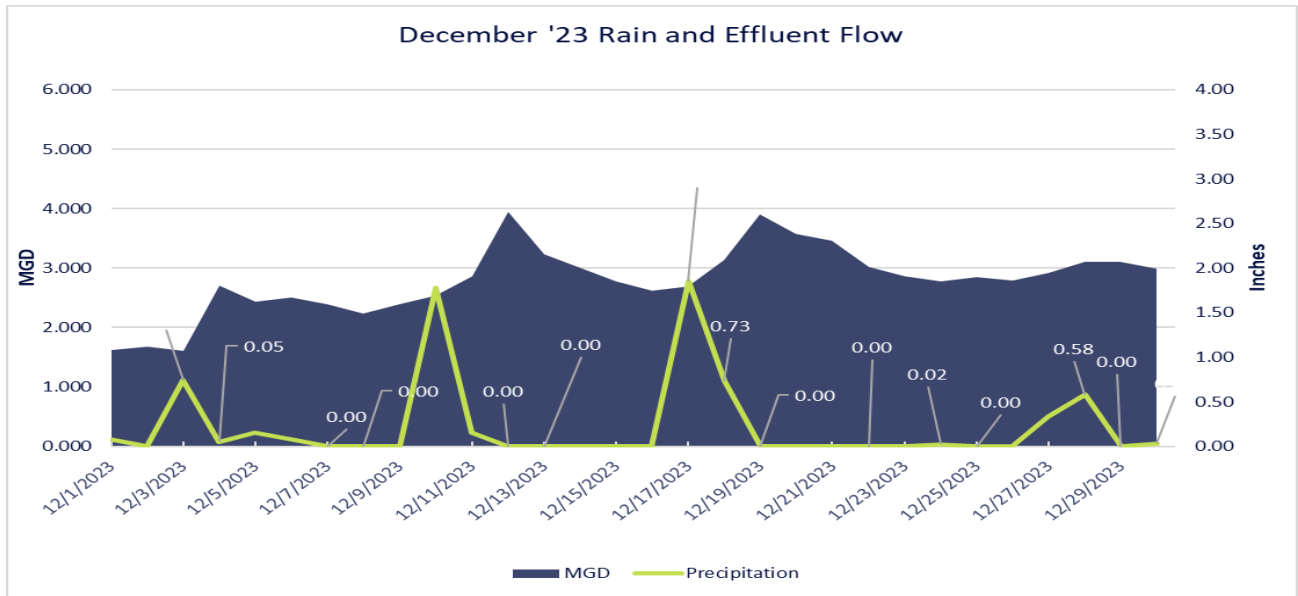
## 2. STAFFING:

Current Employee Licenses as of 09/14/2023										
		Hoisting		Wastewater			NEWEA Collections			NEWEA Laboratory
Employee	Title	1C Forklift	1B Boom Truck & Forklift	3M	5C	7C	I	II	IV	I
Richard Kotouch	Project Manager					X			X	
Megan Kelly-Lynch	Asst. Project Manager	X				X				
Steven Butts	Lab Technician					X				X
Charles Amaral	Maintenance Foreman				X			X		
Garry Murrill	Operator				X			X		
Maxwell Jackson	Operator			X						
Cristian Ryan	Operator									
Michael Hurley	Operator									
Shaun Chaponis (Part Time Weekends)	Operator				X		X			

### 3 FLOWS AND LOADINGS:

#### 3.0 FLOWS, PRECIPITATION, AND WEATHER

- The facility treated a total of **86,494,000** MG during the month. The daily average flow was **2.790** MGD. This was **0.571** MGD less than the previous December monthly average, which was recorded at **3.361** MGD. The highest daily flow was recorded on December 12<sup>th</sup> as 3.940 MGD. The lowest daily flow was recorded on December 3<sup>rd</sup> as **1.598** MGD.
- The highest **peak** flow was recorded on December 11<sup>th</sup> as **6.060** MGD.
- A total of **6.57"** of precipitation was received at the facility. The highest single day precipitation total was recorded on December 17<sup>th</sup> as **1.85"**.
- The coldest day was December 23<sup>rd</sup> at **15°F**. The warmest day was December 18<sup>th</sup> at **62°F**.

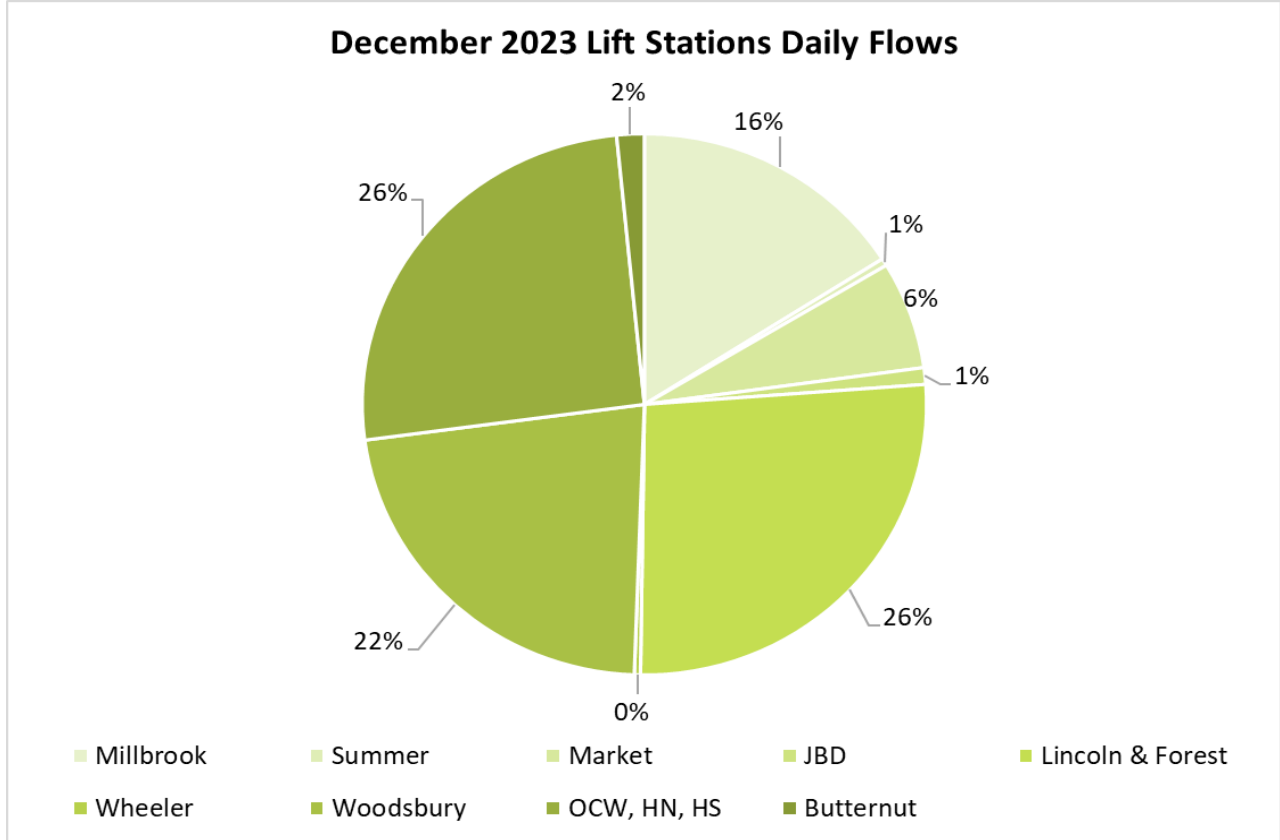


<b>ROCKLAND FLOW AND LOADINGS TRACKING</b>				
<b>Month/Yr</b>	<b>Influent Flow</b>	<b>Effluent Flow</b>	<b>Influent Flow Moving Avg.</b>	<b>Effluent Flow Moving Avg.</b>
	<b>MGD</b>	<b>MGD</b>	<b>MGD</b>	<b>MGD</b>
<b>Jan '23</b>	4.266		2.670	
<b>Feb '23</b>	2.942	2.646	2.577	2.646
<b>Mar '23</b>	3.601	3.601	2.592	3.123
<b>Apr '23</b>	2.586	2.212	2.577	2.82
<b>May '23</b>	2.497	2.174	2.603	2.658
<b>June '23</b>	2.083	1.735	2.61	2.473
<b>July '23</b>	2.404	2.073	2.666	2.407
<b>Aug '23</b>	2.102	2.024	2.706	2.352
<b>Sep '23</b>	2.457	2.532	2.76	2.374
<b>Oct '23</b>	2.114	2.161	2.73	2.351
<b>Nov '23</b>	2.069	2.069	2.711	2.323
<b>Dec '23</b>	3.302	2.79	2.702	2.365

### 3.2 LIFT STATION FLOWS

The lift stations accounted for **9,970,926** gallons throughout the month, **12%** of the total plant flow. Please note that monthly lift station flow totals are purely estimates based off of pump run hours and estimated flow rates. Values are not intended to in any way be used as design capacity volumes for potential future rehab / replacement projects.

Total Flows for December 2023	
Station	Total Gallons
Millbrook	1,003,319
Summer	27,120
Market	403,500
John Burke	62,640
Lincoln, Forest	1,659,002
Wheeler	22,140
Woodsbury	1,402,205
OCW, HN, HS	5,292,000
Butternut	99,000
<b>Total:</b>	<b>9,970,926</b>

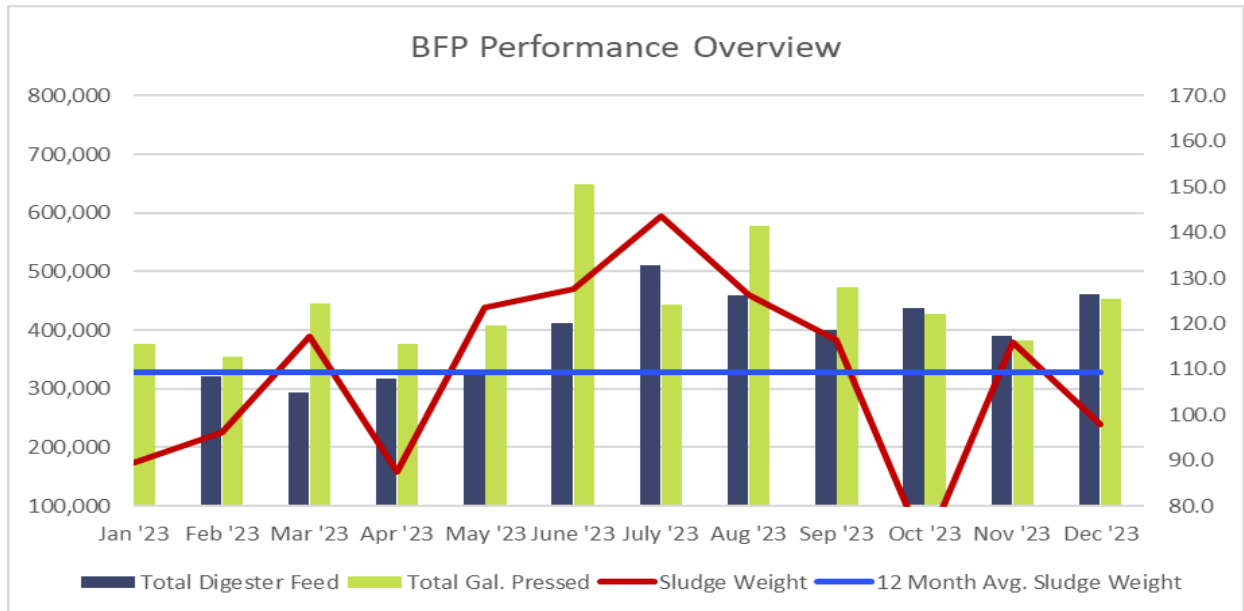


## Lift Station Monthly Average Daily Flows (GPD)

Month	Millbrook	Summer	Market	John Burke	Lincoln	Forrest	Wheeler	Woodsbury	Old Country Way	Hingham North	Hingham South	Butternut
	GPD	GPD	GPD	GPD	GPD	GPD	GPD	GPD	GPD	GPD	GPD	GPD
Jan '23	47,052	888	14,750	2,480	2,580	56,070	786	57,780	60,155	169,200	199,974	3658
Feb '23	44,087	866	13,554	5,186	3,000	52,950	4,899	50,207	58,650	164,565	199,029	3182
Mar '23	48,137	1,029	14,893	3,180	3,879	56,625	868	52,650	69,450	172,221	220,629	4243
Apr '23	46,209	994	15,054	3,180	3,343	57,150	861	52,714	53,325	137,507	170,486	3,857
May '23	36,566	874	15,321	4,226	2,786	49,800	784	40,436	52,425	145,800	180,514	2,796
June '23	32,516	831	12,964	2,983	2,250	50,100	746	34,393	49,575	33,264	178,200	2,411
July '23	32,554	960	13,339	2,897	2,721	54,300	778	44,550	54,300	151,971	174,343	2,475
Aug '23	43,894	857	13,875	3,180	3,086	57,600	5,001	58,243	67,200	180,707	219,858	4,146
Sep '23	30,356	857	13,554	1,637	2,679	51,300	765	45,321	52,650	153,900	166,628	2,379
Oct '23	36,720	866	14,250	1,843	2,550	50,850	784	57,343	50,325	145,414	156,986	2,025
Nov '23	30,047	857	13,286	3,137	2,743	58,050	1,080	36,450	46,650	130,757	145,414	2,539
Dec '23	35,833	969	14,411	2,237	2,936	59,250	791	50,079	57,300	153,128	189,000	3,536
<b>Average</b>	<b>38,664</b>	<b>904</b>	<b>14,104</b>	<b>3,014</b>	<b>2,879</b>	<b>54,504</b>	<b>1,512</b>	<b>48,347</b>	<b>56,000</b>	<b>144,870</b>	<b>183,422</b>	<b>3,104</b>

#### 4.0 SOLIDS HANDLING

The BFP operated a total of **150.45** hours this month and a total of **454,170** gallons were processed producing **97.94** Wet Tons of sludge that was hauled from the facility. The average BFP feed percent solids were **2.04%** and the BFP Cake average percent solids were **21.95%**. The sludge processing Dry Tons conversion sheet is attached to this report.



Date	BFP Run Hours	Total Digester Feed	Total BFP Feed	Polymer Used	Actual Sludge Weight	Average Press Feed Total Solids	Average Cake Total Solids	Sludge Pick Up	Grit Removed
	HRS	Gal.	Gal.	Gal.	Wet Tons	%	%	Dumpster	Tons
Jan '23	129.2	324,034	377,362	119.2	89.4	1.72	19.24	6.00	
Feb '23	134.3	320,572	355,441	115.5	96.1	1.59	18.77	6.00	
Mar '23	147.1	293,999	445,395	128.8	117.1	1.62	18.98	6.00	
Apr '23	123.3	318,169	377,424	105.6	87.5	2.21	20.87	6.00	
May '23	125.6	329,820	407,350	114.4	123.5	2.08	21.52	6.00	
June '23	183.7	411,781	649,427	155.6	127.6	1.88	22.32	8.00	
July '23	128.4	444,319	510,385	109.6	143.6	2.11	21.39	7.00	
Aug '23	161.6	459,960	577,299	128.1	126.3	2.01	22.81	7.00	
Sep '23	142.7	400,268	473,224	113.6	116.4	1.92	22.35	6.00	
Oct '23	127.4	438,575	428,509	112.0	70.5	2.00	22.64	5.00	
Nov '23	132.4	389,377	381,901	108.8	116.0	2.18	22.12	8.00	
Dec '23	150.5	460,829	454,170	137.6	97.9	2.04	21.95	6.00	
<b>Annual Total</b>	1,686	4,591,703	5,437,887	1,449	1,312	****	****	77	0.00
<b>Avg.</b>	140	382,642	453,157	121	109	1.95	21.25	6.4	****



## 5.0 ENVIRONMENTAL COMPLIANCE

### 5.1 REGULATORY REPORTING

- The EPA and MADEP December NETDMR was submitted on the CDX website on 1/8/2024.

### 5.2 NPDES COMPLIANCE

The facility will be reporting (1) exceedance(s) for the month of December 2023

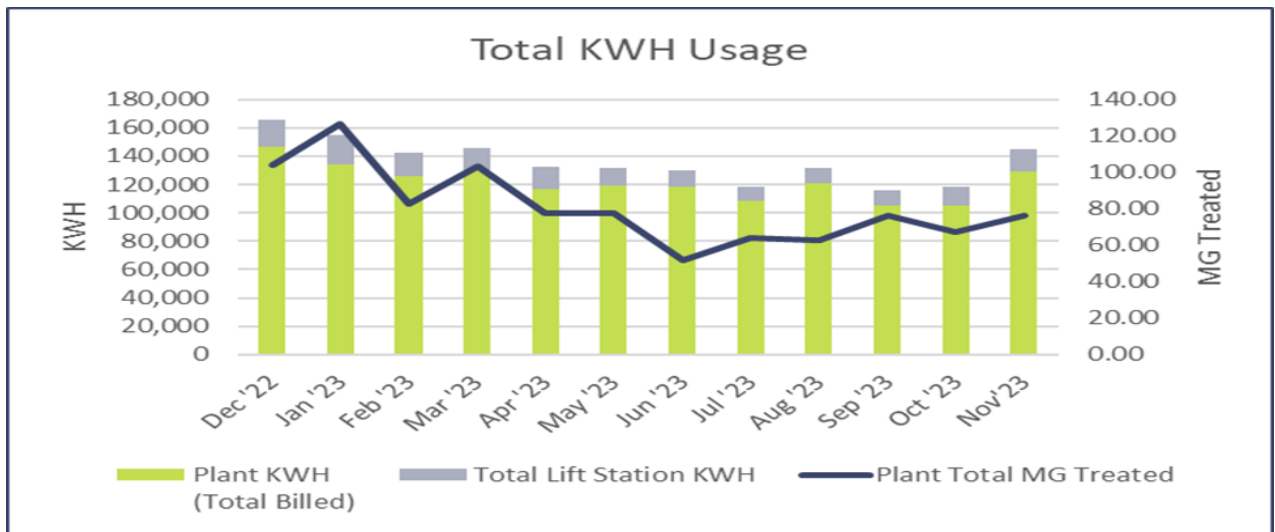
Date	Plant Flow	BOD	BOD	TSS	TSS	NH3	Total P	Ph	E. Coli Coliform	Aluminum	Copper	Dissolved Oxygen	Limits	Monthly Avg.	Weekly Avg.	Daily Max
	MGD	Mg/L	Lbs./Day	Mg/L	Lbs./Day	Mg/L	Mg/L	Ph	CFU/100 ml	Ug/L	Ug/L	Mg/L				
Fri, Dec 1	1.616							7.62					BOD	Oct. 1 - April 30 20 Mg/L 417 lbs/day	20 Mg/L 417 lbs/Day	30 Mg/l 626 lbs/Day
Sat, Dec 2	1.676							7.59								
Sun, Dec 3	1.598							7.44								
Mon, Dec 4	2.701							7.47				TSS	May 1 - Sept. 30 6 Mg/L 125 lbs/Day	6 Mg/L 125 lbs/Day	10Mg/L 209 lbs/day	
Tue, Dec 5	2.431							7.44	31							
Wed, Dec 6	2.503	6.0	125	2.0	42	0.30	0.18	7.38		16	4.0					
Thu, Dec 7	2.390							7.47				NH3	Oct. 1 - April 30 20 Mg/L 417 lbs/Day	20 Mg/L 417 lbs/Day	30 Mg/l 626 lbs/Day	
Fri, Dec 8	2.227							7.45								
Sat, Dec 9	2.389							7.49								
Sun, Dec 10	2.534							7.46				Total Phosphorus	May 1 - Sept. 30 10 Mg/L 209 lbs/Day	10 Mg/L 209 lbs/Day	15Mg/L 313 lbs/day	
Mon, Dec 11	2.864							7.55								
Tue, Dec 12	3.940							7.54	387							
Wed, Dec 13	3.236	5.0	135	7.0	189			7.44				Ph	Oct.1 - Mar. 31 3.3 Mg/L	3.3 Mg/l	5.7 Mg/L	
Thu, Dec 14	3.000							7.48	41							
Fri, Dec 15	2.777							7.48								
Sat, Dec 16	2.623							7.40				E. Coli	Apr. 1 - May 31 2.5 Mg/L	2.5 Mg/l	5.7 Mg/l	
Sun, Dec 17	2.686							7.47								
Mon, Dec 18	3.135							7.63								
Tue, Dec 19	3.907							7.38				Aluminum	June 1 - Sept. 30 1.0 Mg/L	1.0 Mg/L	1.5 Mg/L	
Wed, Dec 20	3.570	10.0	298	5.0	149	0.50	0.19	7.40	28							
Thu, Dec 21	3.454							7.38								
Fri, Dec 22	3.018							7.37				Copper	Apr. 1 - Oct. 31 0.2 Mg/L	*****	*****	
Sat, Dec 23	2.858							7.25								
Sun, Dec 24	2.780							7.31								
Mon, Dec 25	2.841							7.44				Plant Flow	Nov. 1 - Mar. 31 1.0 Mg/L	*****	*****	
Tue, Dec 26	2.782							7.44	378							
Wed, Dec 27	2.919	10.0	243	2.0	49			7.47								
Thu, Dec 28	3.108							7.46				Daily Max	May 1 - Sept. 30 > 7.4 mg/L	*****	*****	
Fri, Dec 29	3.101							7.45								
Sat, Dec 30	2.984							7.42								
Sun, Dec 31	2.846							7.37				Daily Min.	*****	*****	*****	
Daily Max	3.940	10.00	297.74	7.00	188.92	0.50	0.19	7.63	387.00	*****	*****					*****
Daily Min.	1.598	*****	*****	*****	*****	*****	*****	7.25	*****	*****	*****					
Month Avg.	2.790	7.75	200.25	4.00	107.25	0.40	0.19	7.45	88	16	4.0	*****	*****	*****	*****	

## 6.0 ENERGY CONSUMPTION

### 6.1 ELECTRICAL OVERVIEW

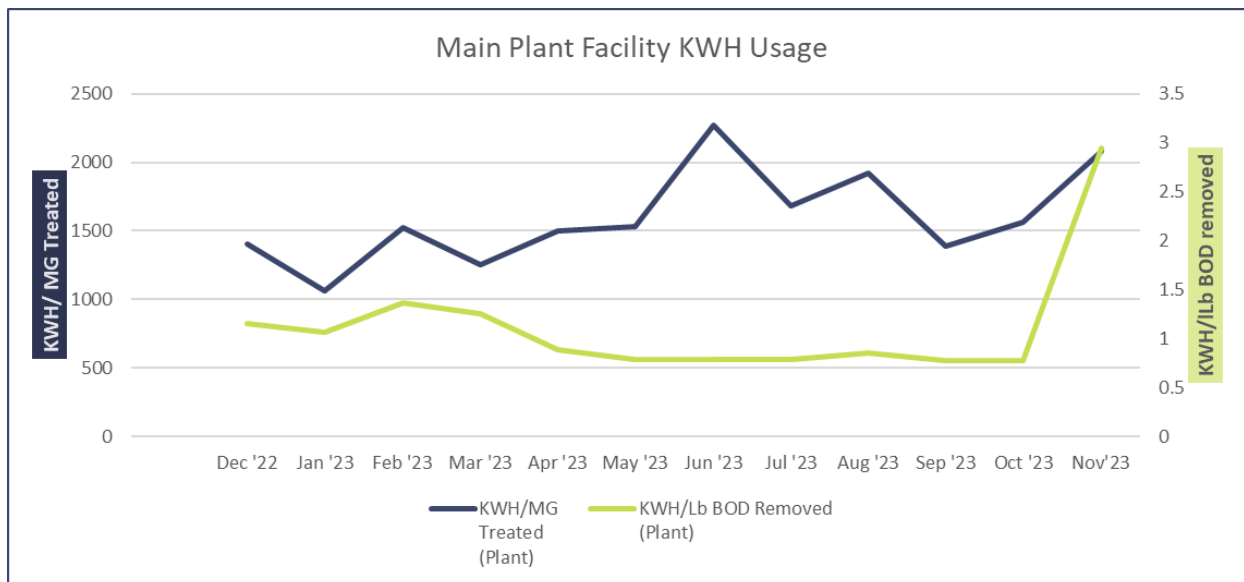
The department used a total of **142,597 KWH** for the month of December 2023. Of this total, the lift stations accounted for **9.3%**, using **142,597 KWH**. The Main Plant accounted for the remaining **129,300 KWH**. The KWH/ MG treated was **2,083** for the month and the KWH/Lb. BOD Removed was **2.95** KWH/Lb. for the month.

Monthly Energy Consumption										
Month	Plant Average Daily Flow (NO HFMP)	Plant Total Influent Flow	Plant KWH (Total Billed)	KWH/MG Treated (Plant)	Plant Lbs BOD Removed	KWH/Lb BOD Removed (Plant)	Off Peak Demand (Plant)	Peak Demand (Plant)	Total Lift Station KWH	Total KWH (Plant & Stations)
	MGD	MG	KWH	KWH/MG	Lbs	KWH/Lb	KW	KW	KWH	KWH
Dec '22	3.36	104.19	146,400	1,405	127,264	1.15	243	258	19,421	165,821
Jan '23	4.08	126.55	134,400	1,062	126,998	1.06	252	258	20,049	154,449
Feb '23	2.94	82.38	125,400	1,522	92,522	1.36	213	210	16,712	142,112
Mar '23	3.33	103.31	129,600	1,254	103,530	1.25	204	213	16,322	145,922
Apr '23	2.59	77.57	116,400	1,501	130,686	0.89	198	210	15,893	132,293
May '23	2.5	77.4	118,800	1,535	151,100	0.79	183	189	12,637	131,437
Jun '23	1.73	52.04	118,200	2,271	149,709	0.79	183	201	12,127	130,327
Jul '23	2.07	64.26	108,300	1,685	137,511	0.79	222	231	12,127	130,327
Aug '23	2.02	62.74	120,600	1,922	142,457	0.85	192	201	10,113	118,413
Sep '23	2.53	75.95	105,300	1,386	134,488	0.78	195	213	10,893	131,493
Oct '23	2.16	67.00	104,700	1,563	134,616	0.78	195	201	10,331	115,631
Nov '23	2.07	62.06	129,300	2,083	43,777	2.95	207	234	13,297	142,597
Average	2.62	79.62	121,450	1,599	122,888	1.12	207	218	14,160	136,735



## Monthly Lift Station KWH

Month	Hingham North	Hingham South	Spruce	Butternut	Old Country Way	Market	Woodsbury	Lincoln	Forest	Wheeler	Summer	Milbrook	John Burke	Total
Nov'22	2,907	4,600	218	66	1,184	832	1,240	308	2,043	63	67	1,734	207	15,469
Dec'22	3,575	6,100	156	83	1,427	957	1,841	352	2,515	63	63	2,026	263	19,421
Jan'23	3,577	6,500	145	90	1,802	924	1,848	341	2,466	123	62	1,863	308	20,049
Feb'23	3,039	5,000	141	70	1,281	862	1,440	325	2,187	227	59	1,749	332	16,712
Mar'23	2,995	5,100	246	434	1,260	851	1,353	283	1,915	58	67	1,524	236	16,322
Apr'23	3,531	4,100	176	0	1,174	781	1,447	311	2,179	82	65	1,922	125	15,893
May'23	2,373	3,800	114	69	956	695	1,034	201	1,587	57	59	1,459	233	12,637
Jun'23	2,040	4,200	145	62	887	409	1,116	186	1,714	65	63	1,064	176	12,127
Jul'23	1,810	3,600	157	57	897	306	868	156	1,159	56	58	891	98	10,113
Aug'23	2,145	3,400	109	58	911	313	838	163	1,933	59	56	818	90	10,893
Sep'23	1,646	3,400	226	53	911	403	967	188	1,478	56	52	874	77	10,331
Oct'23	2,204	3,700	151	60	1,003	792	1,523	257	1,894	91	61	1,389	172	15,313
Average	2,654	4,458	165	92	1,141	677	1,293	256	1,923	83	61	1,443	193	14,607



## 7.0 MAINTENANCE

### 7.1 WORK ORDER OVERVIEW

WO Type	Total This Month	Total This Year
<b>Preventative Maintenance</b>	<b>179</b>	<b>1,040</b>
<b>Corrective Maintenance</b>	<b>11</b>	<b>100</b>
<b>Emergency Call Outs Total</b>	<b>7</b>	<b>27</b>

### 7.2 EMERGENCY CALL OUTS FOR THE MONTH

Type	Total this Month	Total this Year
<b>Sewer Back Up / Collection System</b>	0	2
<b>Pump Station</b>	3	17
<b>Plant</b>	2	4
<b>Odor</b>	0	0
<b>Power Outages</b>	2	3
<b>Total:</b>	<b>7</b>	<b>26</b>

### 7.3 INSPECTIONS / ANNUAL PMS COMPLETED DURING THE MONTH

1. All pump station alarms checked
2. Spruce probe cleaned weekly
3. Eye wash inspections completed weekly
4. Fire extinguisher inspections completed monthly
5. Dependable Petroleum monthly UST Inspection
6. Appollo Safety Quarterly Inspection

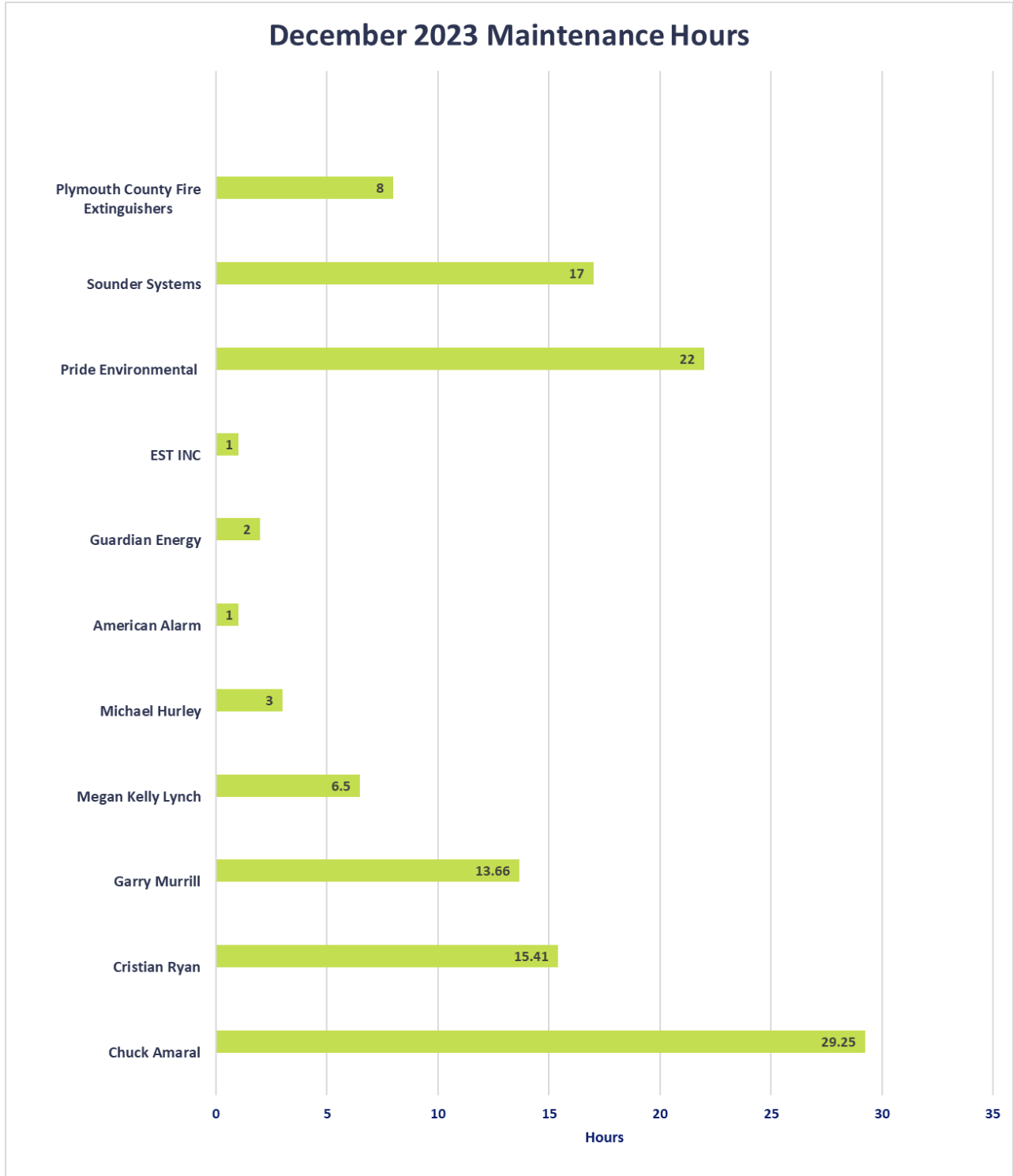
### 7.4 COLLECTION SYSTEM AND IPP ASSISTANCE PERFORMED BY VEOLIA

#### **COLLECTION SYSTEM ASSISTANCE:**

Type	Total This Month	Total This Year
<b>Sewer Inspection / Tie-Ins</b>	1	1
<b>Sewer Location mark Outs</b>	26	364
<b>Sewer Back Up</b>	0	1

## 7.5 WORK ORDER STATISTICS

There were 118.82 total reported maintenance hours during the month. Of this total, outside contractors accounted for 43% with 51 hours recorded.



## 8.0 FINANCIAL ACCOUNTING- REPAIR / MAINTENANCE (JULY '23 – JUNE '24)

Item	Budget	Spent Month	Spent Year	Remaining
<b>R &amp; M (Project)</b>	\$100,000.00	\$7,783.16	\$52,563.43	\$47,436.57

### 8.1 SIGNIFICANT R&M PURCHASES

1. Purchased a polymer pump motor from Blanchard Electric \$1,010.00
2. Annual support fee for Linko Technology CMMS Program \$1,371.00
3. 10' step rolling ladder from Grainger \$1,775.29

## 9.0 ATTACHED REPORTS

- Discharge Monitoring Report
- HACH Wims Data Reports
- Cumulative and Monthly Violation Reports
- Financial Reports
- Solids Removal Summary